Amendments to the Drawings:

The attached sheet of drawings includes changes to Figure 10. This sheet replaces the original sheet.

Attachment

Remarks/Arguments:

Applicants' disclosure is directed to a hermetic compressor that includes a bipolar permanent magnet motor. The motor includes a stator (including a stator core) and a rotor (including a rotor core). A permanent magnet is disposed in rotor core. In an exemplary embodiment, an axial length of the rotor core is longer than an axial length of the stator core. In an exemplary embodiment, an axial length of the permanent magnet is shorter than the axial length of the rotor core.

FIG. 10 has been amended as required, thus obviating the objection to the drawings.

Claim 10 has been amended as required, thus obviating the objection to claim 10.

Claims 1, 11 and 12 stand rejected under 35 U.S.C. § 102(b) as anticipated by Tamura et al. (U.S. Patent No. 6,547,538). Claims 2-10 and 13-18 stand rejected under 35 U.S.C. § 103(a) as obvious over Tamura and Kojima et al. (U.S. Pub. No. 2004/0191094). It is respectfully submitted, however, that the claims are patentable over the art of record fro the reasons set forth below.

Tamura is directed to an electric compressor which includes a motor. As shown in FIG. 1, for example, the motor includes a rotor 55 (including a rotor core 68) and a stator 67 (including a stator core).

Kojima is also directed to an electric compressor which includes a motor. As shown in FIG. 3, for example, the motor includes a rotor 314 (including a rotor core 315) and a stator 113 (including a stator core 113a). In the embodiment shown in FIG. 3, the rotor core 315 has a longer axial length than the stator core 113a.

Applicants' invention, as recited by claim 1, includes a feature which is neither disclosed nor suggested by the art of record, namely:

> ...the rotor having a built-in permanent magnet in the rotor core, an axial length of the permanent magnet being less than the axial length of the rotor core...
>
> ...the permanent magnet is positioned in the rotor core so that it extends from a bottom surface of the rotor core at least to a bottom surface of the bore....

(Emphases added).

By way of example, a marked up version of Applicants' FIG. 4 is provided below on page 9. In the exemplary embodiment shown, permanent magnet 205 is disposed in the rotor core 203. The permanent magnet 205 has an axial length that is less than the axial length of rotor

core 203. The permanent magnet 205 is positioned in the rotor core 203 so that it extends from a bottom surface of the rotor core (labeled in the drawing) at least to a bottom surface of the bore 212 (the bottom surface of the bore is labeled in the drawing). This feature is found in the originally filed application at page 13, lines 5-9 and FIG. 4. No new matter has been added.

As shown in FIG. 1 of Tamura, for example, Tamura's electric compressor includes a stator 67 (including a stator core) and a rotor 55 (including a rotor core 68). A magnet 70a is disposed in the rotor core 68. As shown, the magnet 70a has the same length as the rotor core 68.

In Kojima, some of the figures show a permanent magnet disposed in a rotor core where the permanent magnet has an axial length that is less than the axial length of the rotor core. One such figure is FIG. 3, a marked up version of which is provided below on page 10. As shown in marked up FIG. 3, while the permanent magnet 315a has an axial length that is less than the axial length of the rotor core 315, the permanent magnet 315a does not "extend[] from a bottom surface of the rotor core" (marked in the drawing).

FIG. 4 (marked up)

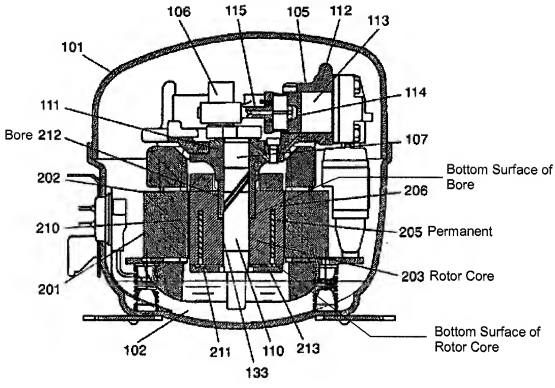

Exhibit- Do Not Enter

FIG. 3

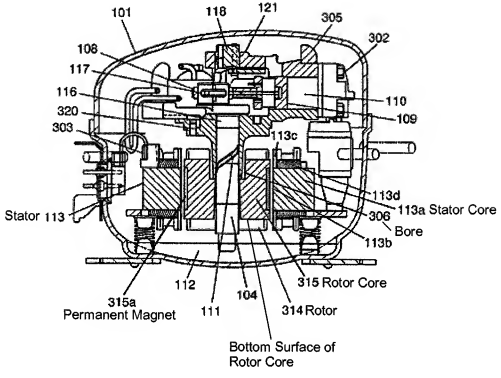

Exhibit - Do Not Enter

It is because Applicants include the features of "the rotor having a built-in permanent magnet in the rotor core, an axial length of the permanent magnet being less than the axial length of the rotor core" and "the permanent magnet is positioned in the rotor core so that it extends from a bottom surface of the rotor core at least to a bottom surface of the bore," that the following advantages are achieved. Namely, vertical overlap between the permanent magnet and the bore can be minimized. "[T]he magnetic flux by permanent magnet 205 occurs in the large part having no bore 212 in rotor core 203, so that a magnetic path wider than the size of permanent magnet 205 can be formed, the material cost of permanent magnet 205 can be reduced without largely reducing the effective magnetic flux amount of permanent magnet 205. Therefore, the efficiency is increased and simultaneously the cost is reduced." See Applicants' specification at page 15, lines 4-12. By way of contrast, in Kojima, the vertical overlap between the permanent magnet and the bore is high and the length of the permanent magnet (that is disposed in an area of the rotor that is not adjacent to the bore) is low.

Accordingly, for the reasons provided above, claim 1 is patentable over the art of record.

Claims 2, 3 and 5-18 include all features of claim 1 from which they depend. Thus, claims 2, 3 and 5-18 are also patentable over the art of record for the reasons set forth above.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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Attachments: Figure 10 (1 sheet)

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